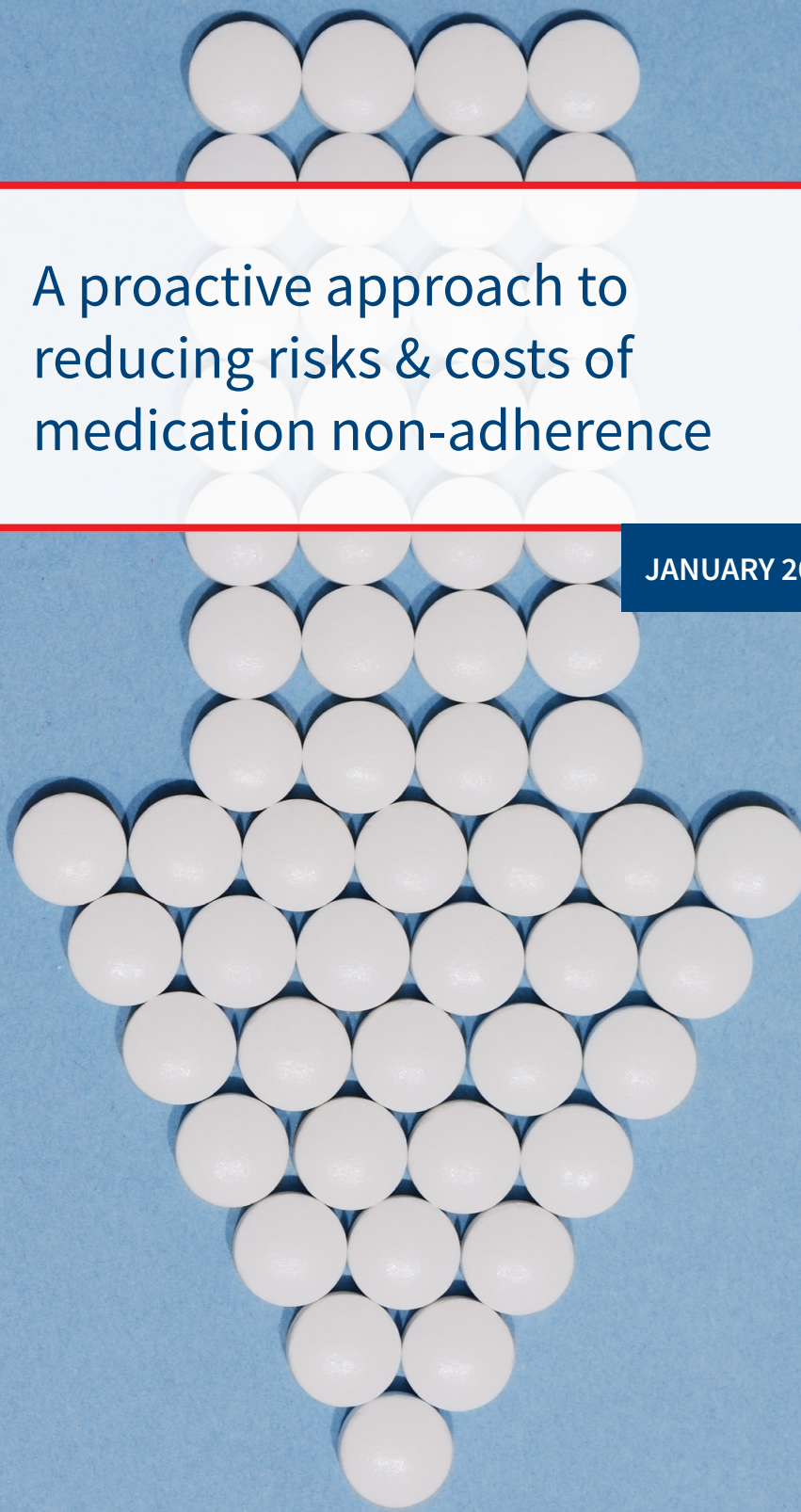


WHITE PAPER

A proactive approach to reducing risks & costs of medication non-adherence

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Help stop non-compliance before it happens using socioeconomic data

Daily medication is a fact of life for most Americans. Some 60% take one medication every day for a chronic illness, and 24% take four or more; for seniors, those numbers rise to 89% taking one and 54% taking four or more.¹ Too many of those patients, however, are not compliant with their medication regimens. As many as 75% of adults fail to adhere in at least one way at least once, and 69% of patients taking four or more daily medications are consistently non-compliant, regardless of their age.^{2,3} Their failure to follow doctors' orders has a significant impact on healthcare costs. It's estimated that medication non-adherence is responsible for almost \$300 billion in avoidable healthcare costs annually—and that it contributes to as many as 125,000 premature deaths.⁴

By the Numbers:
Adherence Lapses a Common Problem: Outcomes Suffer and Readmissions Risks Rise
 Improving medication adherence benefits every stakeholder.

29% cost reduction achieved for every 10% improvement in medication adherence ²¹	89,000 deaths prevented each year by better adherence to antihypertensive treatment ¹⁰	\$106 B achievable savings from better antihypertensive treatment adherence ¹⁰	\$4,200 saved annually for each more adherent diabetes patient ¹⁰	\$300 B total cost of non-adherence when all patient settings are included ²²
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More people taking daily medications mean more opportunities for medication non-compliance.

60% of adults in the US take a prescription medication every day ⁹	100% growth, from 2000 to 2012, of the patient population taking five or more medications every day ⁹	30% of new prescriptions overall are never filled at pharmacies ²³	50% of all prescriptions are not taken as prescribed ²³
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Failure to comply with medication regimens has enormous consequences. It's known to increase hospitalizations, nursing home admissions and physician visits, and to cause poorer clinical outcomes—and even premature death.

125,000 patients die each year from adherence-related complications ²³	25% increased risk of death for the 50% of patients on statins who stop taking them within a year ²³	\$2,000 the annual extra cost of physician visits for a non-adherent patient ²⁴	40% of all nursing home admissions are compliance-related ²⁴	30-50% of chronic disease treatment failures are caused by non-adherence ²³
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There are myriad reasons for patients not taking their medications—and many of those reasons stem directly from where and how those patients live and work. In fact, 68% of patients report at least one socioeconomic challenge—and 57% are considered to be at moderate-to-high risk for financial insecurity, isolation, housing insecurity, transportation trouble, food insecurity or health illiteracy.⁵ All those factors can impact medication compliance. A 2019 report from Kaiser Permanente Research, called *Social Needs in America*, also found that those unmet social needs affect 91% of patients with annual incomes less than \$25,000—and 40% of those with annual incomes over \$150,000.⁵

Unmet social needs affect 91% of patients with annual incomes less than \$25,000.

Information enables targeted care management and patient engagement programs

When healthcare organizations have the right information to identify patients with a greater likelihood of medication non-adherence and the possible causes—information that incorporates individuals' specific potential socioeconomic barriers—those organizations can take a proactive approach to addressing those non-compliant patients. The cost of investing, in advance, in the resources required to minimize medication non-adherence is far less than the billions of dollars spent every year on the hospitalizations—as many as 10% of all admits—that result from that non-compliance.⁶ The key to success: using the right data and analytics to target high-risk patients and detail the potential socioeconomic barriers they face before non-adherence becomes a problem. That helps payers, providers and pharmacies intervene earlier and improve patient outcomes.

Social determinants of health are becoming increasingly important in care management

Social determinants of health (SDOH) are the conditions of everyday life that impact physical and emotional well-being by influencing patients' likelihood of developing certain conditions and their ability to effectively manage them. Where people are born, grow, live, work and age, in fact, accounts for a larger portion of overall outcomes than medical care determinants. One study assigned 20% to medical treatment, 30% to patients' health habits and 50% to social determinants.⁷

According to the US Centers for Disease Control & Prevention (CDC), these key socioeconomic factors have the biggest impact on patient health:⁸



Social & community context



Economic stability



Neighborhood & built environment



Education

Research from LexisNexis® Risk Solutions highlights hidden ways SDOH can impact health outcomes, including:



Homebound people without family members nearby may not have access to transportation to pick up their prescriptions in a timely manner



People with low health literacy may not be capable of taking their medications as prescribed, or may not understand the importance of taking their medications as prescribed



People who live in a high-crime neighborhood may not be able to exercise outdoors or walk to public transportation



Many low-income areas are considered food deserts, where patients don't have access to the foods required to meet their dietary needs

Healthcare organizations need specific information from public and proprietary records, clinically validated against actual health outcomes, to identify such possible barriers to patient compliance and health management so they can target resources to address them proactively.

SDOH factors affect medication adherence in several key ways

The patients most likely to become non-adherent have characteristics in common that are associated with known SDOH barriers to compliance.

- For example, poverty is a known influencer of patients' medication adherence, with higher patient costs linked to a higher non-compliance risk;⁹ 10% of non-adherent patients say cost is a key driver.¹⁰
- Health literacy is another SDOH that impacts compliance. Some patients misunderstand what their prescriptions are for, don't know how to take their medications properly or don't fully understand the information on the labels. That plays a part in the 5.3% of patients who don't follow their medication regimens because of misunderstood side effects, in the 4.8% who stop because they don't understand why they need the medication and in the 2.9% who stop simply because the regimen is too complex.¹⁰
- Medication compliance can be especially troublesome for patients with motivational issues arising from isolation and other factors. When you don't care if the treatment works, you're less likely to comply.¹¹
- College attendance is positively correlated with medication adherence.
- People with relatives or associates who live within 25 miles are more likely to be adherent.

When payers, providers and pharmacies know which patients fall into which risk groups, they can target interventions before the fact.

Sample Interventions Based on Social Needs	
SDOH-Based Needs	Possible Interventions
1 Job insecurity, difficulty affording medications	Connect with sources of prescription financial support, investigate rebate information from drug manufacturers and plan coverage specifics
2 Misunderstood side effects, trouble understanding how and when to take medications	Refer to sources of additional education, customize time and messaging with patients based on education level
3 Apparent apathy or other evidence of isolation or other social need	Direct to social support resources and community activities, arrange for more frequent follow-ups
4 Frequent moves, other housing insecurities	Refer to housing community resources, arrange for prescriptions to be delivered
5 Difficulty getting to pharmacy or to doctor's office	Arrange for rides, discuss public transportation options, suggest auto-renewal or home delivery of prescriptions

Understanding social determinants of health creates new opportunities in care management

Healthcare organizations are increasingly embracing social determinants of health. Payers, providers and pharmacies that understand the lifestyle attributes that determine most of patients' overall wellness, and their impact on outcomes and costs, are using SDOH data to develop innovative intervention and care management programs that wouldn't be possible without that burgeoning stockpile of information and the expertise required to know what it means.

One of the main goals of care management programs derived from SDOH data is improving medication adherence, using SDOH data to identify at-risk patients and develop interventions in time to help keep patients prone to compliance lapses from becoming costly, high-risk cases.

Healthcare organizations armed with the right data and analytics capabilities can target care management programs at the specific patients who need them, improving outcomes and keeping people healthier.

Payers aim to improve adherence in population health management plans

Health plans have been especially aggressive about pinpointing patients' SDOH and using the information to help align the right resources where needed before they lead to non-compliance. Accustomed to a broader perspective and responsibility for multiple components of the patient experience, payers understand that healthier patient populations ultimately lead to more affordable healthcare for everybody—and they know how effective targeted interventions related to medication adherence can be in improving those individual patient populations' health.

A major West Coast health plan, and its affiliated research institute, launched a pilot in 2018 with a leading rideshare service to provide eligible members in a key Northern California market convenient rides at no cost to doctors' appointments and lab and radiology visits; pharmacy prescription rides will soon be added.¹² The service “addresses an issue that typically has been outside the standard resources of a health plan.” Indeed, the rideshare partner has crafted a nationwide collaboration with the plan and several of its affiliates, including one across the country in the Southeast.¹³ Early in 2020, members of its individual plans provided under the Affordable Care Act will have access to transportation for medical appointments, which the plan calls “a significant issue for healthcare consumers.”

The same Southeastern plan also is hiring “dozens of social workers” at its two dozen service centers throughout the state to help “educate and connect enrollees to more than just medical services.”¹⁴ The centers are run by a separate affiliate of the plan.

Social determinants of health are becoming a growing concern in addressing the proper care of health plan members.

Two of the highest-profile rideshare operators have partnered in a Southwestern state that revamped its Medicaid regulations to enable those companies to participate in its non-emergency transportation benefit.¹⁵ Indeed, one of the rideshare firms works with about three dozen Medicaid programs and plans; several states have recently relaxed rules to make it easier for them to provide services.

Providers' patient-centered approach incorporates discussion of SDOH

For physicians, adopting a person-centered approach to treatment that incorporates barriers to medication-taking can lead to better clinical outcomes.⁹ To do that, many providers are incorporating SDOH data into their strategies to address medication adherence. For instance, doctors can better prescribe medications and target interventions when they know which patients are more likely to be non-adherent.¹⁶

A care manager for a patient at risk for type 2 diabetes with SDOH challenges including food insecurity and transportation troubles could contact the patient to confirm those potential barriers to medication adherence and initiate appropriate

interventions.⁵ The SDOH data gathered also reveals insights about patients' health behaviors and neighborhood settings, so it can be repurposed to enable conversations about physical activity and healthy eating.

Pharmacies bring local focus to adherence optimization

It's simple, says research from Johns Hopkins Medicine: Pharmacists play an integral role in improving medication adherence.¹⁷ Indeed, as the healthcare system moves to value-based, accountable care, the integration of pharmacists into the healthcare team is becoming even more essential to improving patient outcomes.¹⁸ And not only are physicians warming to working alongside pharmacists, many are carving out a pharmaceutical piece of their risk-sharing agreements.¹⁹

The fact is, pharmacies play a critical role in improving medication adherence through analysis of SDOH data.

One tactic involves using claims and SDOH data to create out-of-workflow decisions about the best way to engage individual patients; some at-risk populations, for example, might respond better to regular appointments than to a forced interaction when picking up medications. When speaking with patients, asking questions that go beyond the prescribed medication can help pharmacists identify social influencers that might be affecting adherence—including issues patients can't control. A pill might be cost-prohibitive, for instance, or transportation issues may keep a patient from getting to the pharmacy. Medication adherence is often harder for patients in high-crime areas, too. Having access to SDOH information may prompt the pharmacist to approach the prescribing physician about lower-cost alternatives or to help schedule a rideshare or home delivery.²⁰

Engage patients with customized programs built on solid socioeconomic data

Care management and patient engagement programs built on socioeconomic data—assessing individuals for their specific unmet social needs and their potential for medication non-compliance as a result—can help healthcare organizations get ahead of non-adherence risks. Plans, providers and pharmacies can target program resources at the patients who need them most, customizing referrals and interventions to each person before adherence lapses happen—improving outcomes and lowering costs. The key to success is the quality of the SDOH data being used.

The focus on using SDOH data as a critical care management tool is sharpening—especially its use boosting medication adherence. Healthcare organizations that have the right socioeconomic information and the know-how to use it to pinpoint possible compliance problems in their patient populations can develop cutting-edge care management programs that help those at risk help themselves.

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